



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|------------------------|------------------|
| 10/717,178 | 11/17/2003 | Jochen Hoffmann | 2003P52592US | 5974 |
| 46798 | 7590 | 07/07/2005 | | |
| MOSER, PATTERSON & SHERIDAN, LLP GERO G. MCCLELLAN/INFINEON 3040 POST OAK BLVD., SUITE 1500 HOUSTON, TX 77056 | | | EXAMINER PHAM, LY D | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2827 | |

DATE MAILED: 07/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/717,178 | Applicant(s) HOFFMANN ET AL. | |
| | Examiner Ly D. Pham | Art Unit 2827 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 7, 8, 12-14, 16, 18, 20-31 and 34 is/are rejected.
- 7) ☒ Claim(s) 4, 6, 9-11, 15, 17, 19, 32 and 33 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>03-17-05</u> . | 6) <input checked="" type="checkbox"/> Other: <u>See Continuation Sheet</u> . |

Continuation of Attachment(s) 6). Other: statement of reasons for the indication of allowable subject matter.

DETAILED ACTION

1. Applicant's Information Disclosure Statement, IDS, filed March 17, 2005 has been considered by the Examiner.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1 – 3, 5, 7, 8, 12 – 14, 16, 18, 20 – 31, and 34 are rejected under 35 U.S.C. 102(e) as being anticipated by Lehmann (US Pat 6,798,272 B2).

Regarding **claims 1 and 12**, Lehmann discloses a fuse programming circuit for sequentially programming a plurality of fuses comprising:

a plurality of fuse latch circuits (fig. 2, latches 200s) for holding fuse programming data indicating which of the fuses are to be blown (col. 2, lines 33 – 35);

a fuse pointer circuit (fig. 2, pointer latches 214s) for selecting fuses configured to asynchronously advance past fuses that are not to be programmed to select fuses that are to be programmed, as indicated by the fuse programming data (col. 2, lines 28 – 32, also col. 3, lines 44 – 62);

a blow circuit (fig. 7) configured to apply a blow voltage to a fuse selected by the fuse pointer circuit if the fuse programming data indicates the selected fuse is to be blown (fig. 7, exemplary fuse 705 to be blown by read transistors 704 and 719), wherein the application of the blow voltage to the fuse is synchronized with a blow clock signal (col. 2, lines 42 – 49 and col. 4, line 50 – col. 5, line 9. TMEFBLOW and BLOW signals with clock signal CLK_n and CLK, fig. 7).

Regarding **claims 2 and 13**, Lehmann also discloses the fuse programming circuit of claim 1, wherein the fuse pointer circuit is configured to asynchronously advance during a pointer advance mode defined by a pointer advance clock signal (col. 3, lines 7 – 16, figs. 1 – 7, clock signal applied to each pointer latch!).

Regarding **claims 3 and 14**, Lehmann also discloses the fuse programming circuit of claim 2, wherein the fuse pointer circuit comprises a plurality of fuse pointer latches, each associated with one of the plurality of fuse (figs. 2 and 7, wherein fig. 7 is exemplary one of the plurality of fuse pointer latches 214, contained therein an exemplary one of a plurality of fuses 705).

Regarding **claims 5 and 16**, Lehmann also discloses the fuse programming circuit of claim 2, wherein the fuse programming circuit (fig. 7) further comprises a control signal generating circuit (col. 2, lines 33 – 35) configured to receive an external clock signal and generate the blow clock signal and pointer advance clock signal based on the external clock signal (fig. 7, clock signal CLK and CLK_n are shown external to the circuit).

Regarding **claims 7 and 18**, Lehmann also discloses the fuse programming circuit of claim 1, wherein each of the plurality of fuse latch circuits holds a bit of fuse programming data for an associated one of the plurality of fuses (abstract: each fuse latch is a data storage element—holding a bit of programming data).

Regarding **claim 8**, Lehmann also discloses the fuse programming circuit of claim 7, wherein the blow circuit is configured to apply the blow voltage to the fuse selected by the fuse pointer circuit if the bit of fuse programming data in the associated fuse latch circuit indicates the selected fuse is to be blown (fig. 7, since each fuse latch holds one fuse of the plurality of fuses, the fuse indicated to be blown by BLOW signal, col. 4, line 66 – col. 5, line 3).

Claims 20 – 31 and 34 disclose a method for sequentially programming a plurality of fuses which are considered inherent given the fuse programming circuits indicated above.

Allowable Subject Matter

4. **Claims 4, 6, 9 – 11, 15, 17, 19, 32, and 33** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The following is a statement of reasons for the indication of allowable subject matter:

The prior arts fail to teach a fuse programming circuit and its associated method of for sequentially programming a plurality of fuses, further comprising:

the fuse pointer circuit configured to select a fuse when the fuse pointer latch associated with the fuse contains a first value and the fuse pointer latch associated with a previously selected fuse contains a second complementary value.

Or wherein the blow clock signal and the pointer advance clock signal are non-overlapping.

Or wherein the associated fuse latch circuit is configured to change the bit of fus programming data after the associated fuse is blown.

6. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

8. A shortened statutory period for response to this action is set to expire 3 (three) months and 0 (zero) day from the date of this letter. Failure to respond within the period for response will cause the application to become abandoned (see MPEP 710.02(b)).

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ly D. Pham whose telephone number is 571-272-1793. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoai Ho can be reached on 571-272-1777. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ly D. Pham
June 29, 2005


HOAI HO
PRIMARY EXAMINER